

## **REMARKS**

All the claims submitted for examination in this application have been objected to and/or rejected. Applicants have amended their claims and respectfully submit that all the claims currently in this application are patentable over the objections and rejections of record.

Turning first to the objections of record, Claim 26 is objected to, under 37 C.F.R. § 1.75(c), as being improperly dependent from Claim 12 insofar as Claim 26 does not further limit the subject matter of Claim 12. This ground of rejection has been made moot by the cancellation of Claim 26.

The second objection is directed to Claims 19 and 20. These claims are deemed to possess patentable subject matter. However, they each depend from Claim 12 which has been rejected and thus objected to based on their dependence from an unpatentable claim.

Claims 19 and 20 remain in the application. Applicants submit that the amendment to Claim 12, *infra*, overcomes the rejection of that claim and eliminates the objection to Claims 19 and 20.

In regard to Claims 19 and 20, those claims have been amended to overcome a typographical error included therein. That is, both of these claims cite a list of compounds, which is preceded by “selected from.” That phrase denotes an improperly recited Markush group. To overcome this ministerial mistake, applicants have amended Claim 19 to provide proper Markush group language by including the phrase --selected from the group consisting of--. In Claim 20, the incorrect phrase “selected from” has been deleted so that the list of compounds within the scope of Claim 20 is not a Markush group but rather a listing of compounds within the

contemplation of that claim. Thus, the penultimate compound is followed by --or--. It is emphasized that these changes to Claims 19 and 20 do not create a file wrapper estoppel given that the amendments thereto are ministerial corrections.

All the claims submitted for examination in this application have been rejected, under 35 U.S.C. §102(b), as being anticipated by Murthy et al., Indian Drugs, 22(9), 462-464 (1985).

The rejection over Murthy et al. is predicated upon disclosure of compound 3, at Page 463, Registry No. 102677-22-5, which the Official Action avers anticipates the compound having the structural formula (I) when  $R_7$  is  $C(=S)NH_2$ ,  $R_5$  is hydrogen,  $R_6$  is  $p-C_6H_4OCH_3$  and  $R_{1-4}$  is hydrogen.

The Official Action admits that one of the provisos of Claim 12 would distinguish over Murthy et al. if one of the excluded members of the radical  $R_6$  were substituted phenyl. That is, the proviso “when  $R_7$  is  $CONH_2$  or  $CSNH_2$  and  $H_5$  is H or  $CH_3$ , then  $R_6$  is not H,  $CH_3$  or phenyl” does not exclude substituted phenyl.

Applicants have amended Claim 12 and respectfully submit that, as amended, the proviso clearly distinguishes over the compounds disclosed in Murthy et al. That is, the aforementioned proviso has been amended to include substituted phenyl as well as phenyl as excluded members within the scope of  $R_6$  when  $R_7$  is  $CNH_2$  or  $CSNH_2$  and  $R_5$  is H or  $CH_3$ . This proviso excludes the applied compound of Murthy et al. from the contemplation of Claims 12-16. That is, the compound of Murthy et al. anticipates formula (I) when the meanings of  $R_{1-7}$  are as given above. The exclusion of the general class “substituted phenyl” clearly excludes a compound within formula (I) where  $R_6$  is para-methoxyphenyl, when  $R_{1-4}$  are hydrogen,  $R_5$  is hydrogen and  $R_7$  is  $C(=S)NH_2$ .

The above remarks establish the patentability of Claims 12-17, under 35 U.S.C. §102(b), over the applied prior art. Claim 26 need not be considered since it has been cancelled.

The second substantive ground of rejection is directed to Claims 12-18 and 26 which stand rejected, under 35 U.S.C. §103(a), as being unpatenable over Nawwar et al., Arch. Pharm. (Weinheim), 326, 831-836 (1993) taken in view of Buchi, Deutsche Apotheker-Zeitung 1695-1700 (1966).

The Official Action avers that Nawwar et al. discloses ayrlpropenones. However, the Official Action admits that Claims 12-18 recite distinguishing features which establish novelty of the compounds of Claims 12-18 over Nawwar et al. That is, the compound within the scope of Nawwar et al. relied upon in this ground of rejection is stated in the Official Action to be within the scope of formula (I) when R<sub>6</sub> is furan. However, other heterocyclic radicals, such as thiophenes and pyrroles, are not disclosed by Nawwar et al.

To overcome this admission of novelty of Claims 12-18 over Nawwar et al., and to maintain a substantive ground of rejection, the Official Action applies the secondary Buchi disclosure. Buchi is applied for its teaching that thiophenes and pyrroles are commonly substituted for furans for the purpose of modifying the biological activities of lead compounds.

Applicants respectfully submit that this teaching does not make obvious any of the claims of the present application. The claims of the present application are directed to formula (I) which includes no lead atoms in its structure. As such, the basis of equivalence between thiophenes, pyrroles and furans, that is, the alleged equivalence between heterocyclics wherein the heterocyclic atoms are sulfur, nitrogen and oxygen, respectively, does not exist. The Buchi

teaching of equivalence is limited to lead-containing compounds of which compounds within the contemplation of Claims 12-18 are free.

The case law cited in the Official Action in support of the proposition that an obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make the claimed compound in the expectation that compounds similar in structure will have similar properties. That principle does not apply in the present case. The teaching of Buchi is strictly proscribed to lead-containing compounds. That teaching has absolutely no relevance to the claimed compound of the present application, the compound having the general formula (I), insofar as that compound contains no lead. Reconsideration and removal of this ground of rejection is therefore deemed appropriate. Such action is respectfully urged.

The above amendment and remarks establish the patentable nature of all the claims currently in this application. Notice of Allowance and passage to issue of these claims, Claims 12-20, is therefore respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Peter I. Bernstein', with a large, stylized initial 'P' and a long horizontal flourish extending to the right.

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